

REMARKS

The Examiner is thanked for the thorough review of the present application. As attached herewith, independent claim 11 has been amended, to recite that the print mark measuring device and/or register mark measuring device and/or a register measuring device is configured to capture image data of a print mark and is connected to the control unit to transmit the image data to the control unit. Additionally, independent claim 11 has been amended, to recite that the correction factor is calculated by the control unit based on the image data, to regulate the movement of the drive unit. Independent claims 29 and 31 have been amended, in a similar manner as independent claim 11. Additionally, independent claim 29 has been amended, to rewrite claim 30 in independent form, and claim 30 has been cancelled for consistency therewith. Support for these amendments may be found in paragraphs [005], [007] and [0011]-[0012] of the Substitute Specification, for example. Thus, no new matter is presented by these amendments.

Claims 11-12, 18, 22-23, 29, 31 and 34 are currently pending and presented for examination. Applicants respectfully request reconsideration and allowance of the pending claims in view of the foregoing amendments and the following remarks.

Rejection of Claim 16 under Section 112:

The Examiner rejected claim 16 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as their invention. As attached herewith, claim 16 has been cancelled, and thus the basis of this rejection is moot. Accordingly, this rejection should be withdrawn.

Rejections of Claims 11, 12, 18, 22, 23, 29, 31 and 34 under Section 103:

The Examiner rejected independent claim 31 under 35 USC §103(a) as being unpatentable over Kot in view of DE 19723059 and Tokiwa. As discussed above, independent claim 31 recites a print mark measuring device and/or register mark measuring device and/or a register measuring device configured to capture image data of a print mark, and being directed connected to the control unit, to transmit the image data to the control unit. Additionally, independent claim 31 has been amended, to recite that the correction factor is calculated by the control unit, based on the image data, to regulate the movement of the drive unit. None of the

Kot, DE 19723059 or Tokiwa references, alone or in combination, disclose these recitations and accordingly, amended independent claim 31 is patentable.

In rejecting previously-unamended claim 31, the Examiner conceded that Kot failed to disclose a correction factor calculated by the control unit to regulate the movement of the drive unit, looked to Tokiwa to provide this noted deficiency, and cited to FIG. 3 and col. 16, lines 5-24 in support thereof. Specifically, the Examiner contended that the value S2 is the recited “correction factor”, that the slave control section 3 is the recited control unit and that the motor driver 41 is the recited drive unit. In support of this contention, the Examiner stated “in so far as the correction factor is defined in the pending claims, the teaching of Tokiwa fully meets the requirement that a correction factor is calculated by the control unit to regulate the movement of the drive unit as recited.” (Office Action, p. 11).

However, as discussed above, the relevant claim language has been amended, to recite that a print mark measuring device and/or register mark measuring device and/or a register measuring device is configured to capture image data of a print mark, and that the correction factor is calculated by the control unit, based on the image data, to regulate the movement of the drive unit. Tokiwa discloses that each printing mechanism P is driven by “an independent driving means M” (col. 5, line 32), and that each driving means M has a slave control section 3 and rotary encoder 6 “that outputs first pulse signals (hereinafter pulse signals) of a quantity proportional to the amount of rotational angular displacement of the M, and a second pulse signal (hereinafter referred to as Z-phase pulse signal) for one turn of the driving means M.” (col. 5, lines 40-48). Tokiwa discloses that the feedback speed signal output section 39 “integrates the pulse signals output by the encoder 6, calculates a value S2 proportional to the rotational speed of the driving means M” using the equation cited by the Examiner at col. 16, line 25. Indeed, the S2 value is based on the pulse signals that are proportional to the amount of rotational angular displacement of the driving means M. Thus, the S2 value is expressly based on the rotational angular displacement of the driving means M, and is not based on image data of a print mark, as recited in amended independent claim 31. Accordingly, none of the prior art references, alone or in combination, disclose the claimed invention, as recited in amended independent claim 31.

The Examiner further contended that it would have been obvious to modify the control and regulation device 12 of Kot such that it is capable of computing the value S2 taught in Tokiwa proportional to the rotational speed of the adjusting devices 10,11 of Kot “so as to

predictably result in increasing the accuracy and speed in controlling the drive unit.” (Office Action, p. 9). However, even if such a modification was obvious, it would destroy the purpose and/or operability of Kot. The control and regulating device 12 in Kot compares actual deviations of the marks 9, 15 and 16 relative to the line 14, with desired deviations, and transmits actuating variables to the adjusting devices 10,11, based on this comparison. Thus, Kot emphasizes that the adjusting devices 10,11 should be actuated in the appropriate x,y, directions, based on this comparison. If the Examiner’s suggested modification of Kot were performed, in which the control and regulating device 12 were instead assigned to determine some corrective rotational speed of the adjusting device 10,11, the control and regulating device 12 would entirely disregard the deviations of the marks 9, 15 and 16 relative to the line 14, as well as determining an actuating variable of the adjusting devices 10,11 in the x,y directions, and instead would determine some corrective rotational speed of the adjusting devices 10,11, which has no bearing on the actual and desired deviations of the marks 9, 15 and 16, relative to the line 14. Since the suggested modification would destroy the purpose of Kot, it cannot form the basis of the modification of Kot. MPEP §2143.01. Accordingly, amended independent claim 31 is patentable.

Accordingly, amended independent claim 31 is patentable. Amended independent claims 11 and 29 include recitations which are similar to independent claim 31. The arguments stated above with regard to amended independent claim 31 are restated herein with regard to amended independent claims 11 and 29. Accordingly, amended independent claims 11, 29 and 31 are patentable. Their dependent claims, which recite yet further distinguishing features, are also patentable, and require no further discussion herein.

Conclusion

Accordingly, Applicants respectfully request that the Examiner timely pass the application to allowance. Please grant any extensions of time required to enter this paper. The Commissioner is hereby authorized to charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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